REMARKS

Reconsideration of the application is respectfully requested in view of the comments herein.

The Office Action

Claim 25 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1-16 and 21-24 are rejected under 35 U.S.C. §102(e) as being anticipated by Eckel, et al. (US 6,388,399).

Claims 1-2, 4-5, 9, 16 and 21-25 are rejected under 35 U.S.C. §102(e) as being anticipated by Lys, et al. (US Pub No. 2004/0212321).

Claims 1, 16 and 21 are rejected under 35 U.S.C. §102(b) as being anticipated by Hochstein, et al. (US 5,661,645).

35 U.S.C. 112, Second Paragraph, Rejection

The Examiner has rejected claim 25 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. In particular, the Examiner asserts that the phrase "a status signal indicative of at least one of ..." renders the claim indefinite since the phrase "a status signal" means a single signal and the phrase "at least one of ..." means a plural signal. However, it is well established in patent law that the article "a" can indicate "one or more." (See *Tate Access Floors, Inc, v. Interface Architectural Resources, Inc.*, 279 F.3d 1357, 1370 (Fed. Cir. 2002) (stating that it is well settled that the terms "a" or "an" mean one or more). In addition, the phrase "at least one of ..." also indicates one or more. Accordingly, claim 25 is not indefinite, and this rejection should be withdrawn.

First 35 U.S.C. §102(e) Rejection

The Examiner has rejected claims 1-16 and 21-24 under 35 U.S.C. §102(e) as being anticipated by Eckel, et al. (US 6,388,399). This rejection should be withdrawn for at least the following reasons. Eckel, et al. does not teach or suggest each and every element as recited in the subject claims.

Independent claim 1 (and similarly independent claims 16 and 21) recites an

intelligent light emitting diode (LED) module for a traffic signal having at least one LED, wherein the module generates at least one status signal indicative of one or more of, *inter alia*, a light energy emitted from the at least one LED of the intelligent LED module. In the subject Office Action (dated January 23, 2006), the Examiner asserts Eckel, et al. teaches such aspects. To support this assertion, the Examiner contends that the subject claims require at least one status signal and a light emitted from at least one LED and that Eckel, et al. discloses a light sensor that senses ambient light from at least one LED, an intelligent module that generates at least one status signal indicative of one or more of a current and a voltage, and a controller that generates a command signal based on the status signal.

In connection with Figures 2 and 3, Eckel, et al. teaches a network based control system that includes a control unit 36, 60 with a controller 90 that controls various external loads 38 connected to the control unit 36, 60 such as a fluorescent ballast 82, a relay load 84, a dimming load 86, and motor loads. The network based control system also includes an ambient light sensor 44, 410 that facilitates control of the external loads by the control unit 36, 60. (See Figures 2 and 18). The ambient light sensor 44, 410 has ambient light sensor circuitry 450 that senses ambient light from an associated external load. (See col. 29, ll. 5-10). A digitized representation of the sensed light is provided to an ambient light level task 254 that functions to maintain a particular lux level within an area illuminated by the external light source. (See col. 17, ll. 7-14). The ambient light level task 254 operates in conjunction with occupancy / motion sensor circuitry 448 and its related occupancy task 256. (See col. 17, ll. 15-16). If the circuitry 448 detects motion, the external light load is controlled in accordance with the current ambient light level reading. (See col. 17, ll. 17-19). That is, if the light level is greater than or equal to a maintenance lux threshold, then the external light is not turned on. (See col. 17, ll. 19-21). However, if the light level is greater than or equal to a maintain lux threshold, then the external light is turned on in accordance with a lighting priority order (See col. 17, ll. 21-24).

The light sensor unit 410 also includes a LED 74, 414 and a LED 444. (See Figures 3 and 18). The LED 74, 414 is a network node status service indicator used to indicate to a user the status of the node (See col. 19, ll. 6-11 and col. 29, ll. 17-20), and the LED 444 merely provides a user with a visual indication that motion sensor circuitry 448 has detected motion (See col. 30, ll. 21-23). Eckel, et al. does not contemplate using the ambient light sensor 44, 410 to sense light from the LEDs 74, 414 and 444 or

generate status signals indicative of light emitted by them. Rather, the LEDs 74, 414 and 444 are used to provide a visual status indication of the state of the ambient light sensor 44, 410.

Hence, Eckel, et al. teaches sensing, via the sensor unit 44, 410, light emitted by a light source that is external from the sensor unit 44, 410 and the controller unit 36, 60, and controlling such external light source by the controller unit 36, 60. In contrast, the subject claims recite the at least one LED of interest is part of the intelligent LED module, not external to it. In particular, independent claim 1 recites "an intelligent light emitting diode (LED) module ... comprising ... *at least one LED* ... said module generates at least one status signal indicative of one or more of ... ***the*** *at least one LED*...." (Emphasis added).

Further, since neither the sensor unit 44, 410 nor the controller unit 36, 60 monitor and control at least one LED of the sensor unit 44, 410 or the controller unit 36, 60 (they monitor and control external light sources), Eckel, et al. cannot teach or suggest that the sensor unit 44, 410 and/or the controller unit 36, 60 generates a status signal indicative of one or more of a current traveling through, a voltage applied across, and a light energy emitted from such at least one LED. In contrast, subject claims recite the intelligent LED module generates a status signal indicative of at least one of a current traveling through, a voltage applied across, and a light energy emitted from the at least one LED of the intelligent LED module.

Further, since Eckel, et al. does not teach or suggest such status signal, Eckel, et al. cannot teach that such status signal is used to generate an on/off, a dimming, a flashing, and/or an emergency disconnection command for at least one LED of the sensor unit 44, 410 and/or the controller unit 36, 60. In contrast, the subject claims recite such status signal is used to generate an on/off, a dimming, a flashing, and/or an emergency disconnection command for the at least one LED of the intelligent LED module.

In view of the above, it is readily apparent that Eckel, et al. does not teach or suggest each and every element as set forth in the subject claims. Accordingly, the rejection of independent claims 1, 16, and 21 (and claims 2-16 and 22-24) should be withdrawn.

Second 35 U.S.C. §102(e) Rejection

The Examiner has rejected claims 1-2, 4-5, 9, 16, and 21-25 under 35 U.S.C. §102(e) as being anticipated by Lys, et al. (US Pub No. 2004/0212321). This rejection should be withdrawn for at least the following reasons. Lys, et al. does not teach or suggest each and every element as recited in the subject claims.

In the subject Office Action, the Examiner asserts Lys, et al. teaches each and every element as set forth in the subject claims. To support this assertion, the Examiner provides that Lys, et al. teaches a processor and drive circuitry that control light sources through analog control signals such as current and voltage control signals, a light sensor that senses energy emitted from at least one LED, and a status signal used to generate a command signal that controls the at least one LED.

In connection with Figure 7, Lys, et al. discloses a lighting unit 200B with a processor-based controller 204B having a processor 102 and drive circuitry 109. The processor 102 receives signals from a user interface 118 or other signal sources 124 and uses such signals to control the light sources 104A, 104B, and 104C, which are external to the controller 204B. Such control includes generating various current or voltage control signals to vary the intensities of light emitted from the external light sources 104A, 104B, and 104C. Thus, Lys, et al. teaches the controller 204B controls the intensity of light emitted by the lights 104A, 104B, and 104C, which are external to the controller 204B, through current or voltage drive signals in response to signals from the user interface 118 or other external sources 124.

In contrast, independent claim 1 (and similarly independent claims 16, 21, and 25) recites an intelligent LED module having at least one LED. Lys, et al. does not contemplate an intelligent LED module having at least one LED. As describe above, Lys, et al. teaches a controller 204B that controls light sources 104A, 104B, and 104C that are external to the controller 204B. Thus, Lys, et al. does not teach or suggest each and every element as set forth in claims and, hence, does not anticipate the subject claims.

Furthermore, independent claim 1 (and similarly independent claims 16 and 21) recites that the intelligent LED module generates at least one status signal indicative of one or more of, *inter alia*, a current through and a voltage across the at least one LED of the intelligent LED module. As discussed above, the controller 204B taught in Lys, et al. does not include such at least one LED. Therefore, Lys, et al. cannot teach

generating a status signal(s) indicative of a current through or a voltage across at least one LED of the controller 204B. At most, Lys, et al. teaches that the controller 204B generates a current or voltage control signal that drives drive circuitry 109, which controls the external light sources 104A, 104B, and 104C. Claim 25 recites that the intelligent LED module generates at least one status signal indicative of one or more of a current through and a voltage across the at least one LED of the intelligent LED module. As discussed above, Lys, et al. cannot teach generating such status signal(s) from such electrical characteristics since the controller 204B does not have at least one LED.

Furthermore, independent claim 1 (and similarly independent claims 16 and 21) recites that the status signal is indicative of one or more of, *inter alia*, light energy emitted from the at least one LED of the intelligent LED module. Again, the controller 204B taught in Lys, et al. does not include at least one LED; Lys, et al. teaches controlling light sources that are external to the controller 204B. Thus, Lys, et al. cannot teach generating a status signal indicative of such optical characteristic such as light energy emitted from at least one LED of the controller 204B.

Moreover, independent claim 1 (and similarly independent claims 16, 21, and 25) recites that such status signal is used to generate a command signal that controls the at least one LED on the intelligent LED module. Since Lys, et al. does not teach or suggest an intelligent LED module having at least one LED or generating a status signal indicative of current, voltage and/or light energy emitted from the at least one LED, Lys, et al. cannot teach using such status signal to generate a command signal that controls at least one LED of the controller 204B.

In view of the above, this rejection should be withdrawn.

First 35 U.S.C. §102(b) Rejection

The Examiner has rejected claims 1, 16, and 21 under 35 U.S.C. §102(b) as being anticipated by Hochstein, et al. (US 5,661,645). This rejection should be withdrawn for at least the following reasons. Hochstein, et al. does not teach or suggest each and every element as recited in the subject claims.

In the subject Office Action, the Examiner contends that Hochstein, et al. discloses a intelligent LED module that generates a status signal indicative of one or more of a current traveling through at least one LED, a voltage applied across the at least one LED, and light emitted by the at least one LED, wherein the status signal is

used to generate a command signal, including a dimming command, that controls the at least one LED of the intelligent LED module. The Examiner references Figure 6a to support this contention. However, Figure 6a does not teach or suggest such aspects. Rather, Figure 6a discloses an adaptive clamp circuit 24 that is connected to the input power lines 22 and used to clamp the input voltage whenever the line voltage is below some critical amount. Figure 6a does not teach or suggest monitoring a current traveling through, a voltage applied across, and/or a light emitted by any LED of the LED array 12 with the clamp circuit 24.

Independent claim 1 (and similarly independent claims 16 and 21) recites an intelligent LED module having at least one LED. Hochstein, et al. does not contemplate an intelligent LED module having at least one LED. Rather, Hochstein, et al. teaches a power supply 10 that powers a separate LED array 12. Independent claim 1 further recites that the intelligent LED module generates at least one status signal indicative of one or more of, *inter alia*, a current traveling through, a voltage applied across, and a light energy emitted from the at least one LED of the intelligent LED module. As discussed above, Hochstein, et al. does not contemplate monitoring such information with the clamp circuit 24 and, therefore, cannot teach generating such status signal. Independent claim 1 further recites that such status signal is used to generate a command used to control the at least one LED of the intelligent LED module. Hochstein, et al. cannot teach such aspects since such status signal is not contemplated therein.

Since Hochstein, et al. does not teach or suggest each and every element as forth in the subject claims, this rejection should be withdrawn.

CONCLUSION

For the reasons detailed above, it is respectfully submitted that all claims (1-16 and 21-25) remaining in the application are in condition for allowance.

Respectfully submitted,

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CERTIFICATE OF MAILING

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